

ABSTRACT OF THE DISCLOSURE

Two-dimensional detector of ionizing radiation and process for manufacturing this detector

5 This detector comprises sheets (4) emitting particles by interaction with ionizing radiation, semiconducting layers (6) that alternate with the sheets and can be ionized by the particles, and groups of conducting tracks (22) in contact with the layers. Means (26) of creating an electric field are used to collect charge carriers generated in the layers due to
10 interaction with particles, through the tracks. For example, the layer and the corresponding tracks are formed on each sheet and the sheets are then assembled together. For example, the invention is applicable to radiography and can achieve good X-ray detection
15 efficiency and high spatial resolution at the same time.

Figure 1.